# AP Microeconomics
# Final Exam

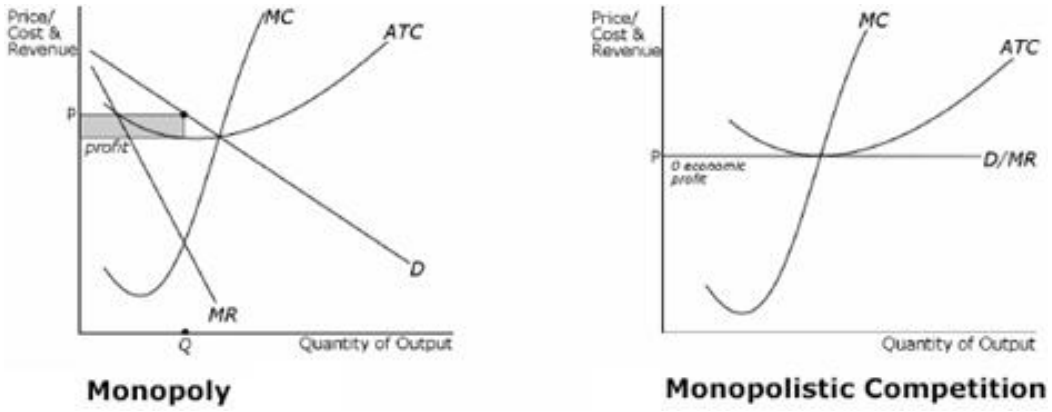
## Instructor's Version

## Answers: Free-Response Questions

**1. Compare and contrast the behavior of a monopolist and a firm in a monopolistically competitive market.** (50 points)

**A. Show a graphical analysis of each firm in the short run. Explain the differences.** (16 points)

**Answer**




The short run graphs will be identical, except the monopolistic competitor's demand curve might be more elastic (slightly flatter) because there are substitutes to the monopolistic competitor's good.

*1 point for identical, or with slightly flatter monopolistic competitor demand curve. However, no point if monopoly demand curve is flatter.*

Both graphs need to be completely labeled.

*2 points*

The graphs should each have a downward sloping demand curve, a U-shaped average total cost curve, a marginal revenue curve, and marginal cost curve.

*1 point for each curve on each graph, for a total of 8 points*

The profit-maximizing price and quantity should be labeled on each graph.

*1 point for each price and quantity on the two graphs, for a total of 4 points*

Both firms should be shown earning positive economic profits.

*1 point*

**B. Compare your graphs from part A with graphs showing the firms in the long run. Explain the differences.** (16 points)

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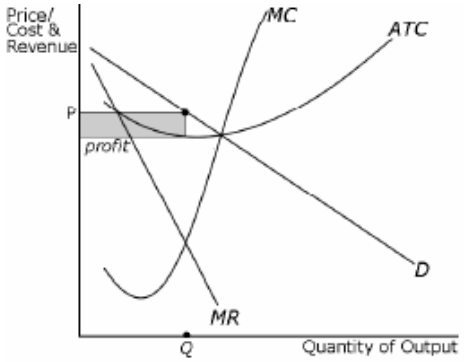
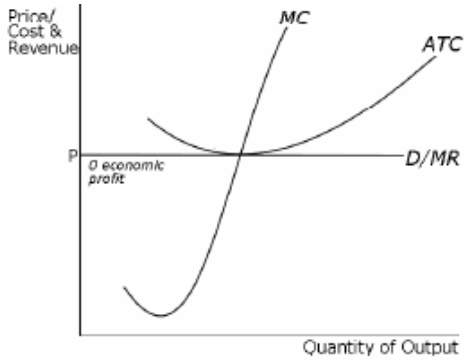
**Answer**




**Monopoly — Long Run**




**Monopolistic Competition — Long Run**

The monopolist's long-run graph is identical to the short-run graph, though a very astute student might point out that demand is more elastic (flatter) in the long run. The monopolist is earning positive profit. The monopolistic competitor will earn zero profit in the long run.

*2 points for identical or more elastic and 2 points for positive profit.*

The *ATC* curve is tangent to the demand curve at the profit max. level of output.

*4 points for this correctly drawn graph*

The change in the monopolistic competitor's situation arises from the free entry condition. Free entry into the market eliminates economic profits in the long run.

*8 points for explaining the role of free entry in eliminating economic profits in the long run*

**C. What are the issues the monopolistic competitor faces that the monopolist doesn't? What characteristics are unique to a monopolistically competitive market?** (9 points)

**Answer**
A monopolistically competitive market has free entry and exit.

*2 points*

Therefore economic profits are zero in the long run.

*2 points*

Firms in this market compete by differentiating their product; product differentiation is a key characteristic of monopolistic competition. Product differentiation is making one's products appear to be or to be different from one's competitors to increase demand for one's products.

*3 points for product differentiation, another 2 points for explanation*

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**D. What are the issues the monopolist faces that the monopolistic competitor doesn't? What characteristics are unique to a monopoly market?** (9 points)

**Answer**
A monopolist earns positive economic profits in the long run.

*2 points*

Barriers to entry prevent rivals from entering the market. Barriers include patents, resource ownership, etc.

*3 points*

Being a monopolist, the firm is much more likely to come under the scrutiny of antitrust legislation.

*2 points*

Monopolists also have the ability to use certain pricing methods that other firms may not, such as price discrimination.

*2 points*

**2. A firm faces a perfectly elastic demand curve. The firm's marginal cost curve is upward sloping. Given this information, answer the following questions.** (25 points)

**A. What type of market is the firm in?** (5 points)

**Answer**
Perfect competition

*5 points*

**B. Draw a graph showing the industry demand and supply curves; draw a second graph showing an individual firm's costs and revenues. Explain the similarities and differences between the curves in both graphs**. (10 points)

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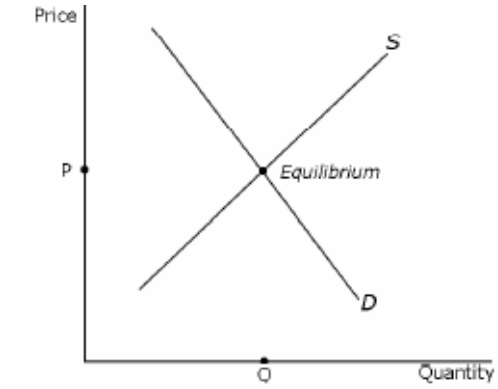
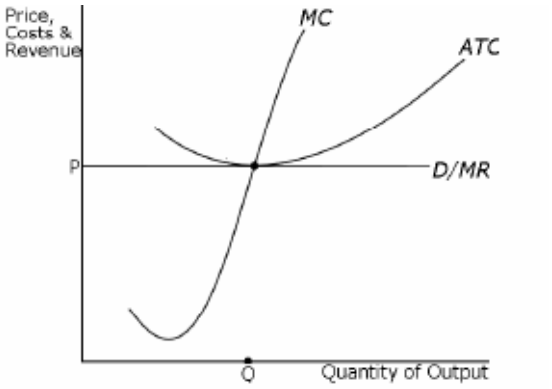
**Answer**




**Industry Demand and Supply**




**Firm's Costs and Revenues**

Industry graph should show a downward-sloping demand curve and an upward-sloping supply curve. Equilibrium should be marked.

*2 points*

The firm's graph should show horizontal *MR* and *D* curves at the equilibrium price.

*1 point*

It should also show the firm's U-shaped *ATC* curve and an *MC* curve that goes through the minimum of *ATC*.

*2 points*

In the industry, the sum of all firms and all consumers creates a supply curve and a downward-sloping demand curve.

*2 points*

For any one firm in perfect competition, the firm has no ability to charge a price higher than the market price, so the demand curve each firm faces is its *MR* curve, which is a horizontal line at the market price. The firm can sell all it wants to at the market price.

*3 points*

**C. In a purely competitive market, the industry's supply curve would be the same as a normal upward sloping supply curve. Using the graph for a purely competitive firm, show the portion of the marginal cost curve that becomes the firm's supply curve. Explain how the industry's supply curve is derived from the firm's supply curves.** (10 points)

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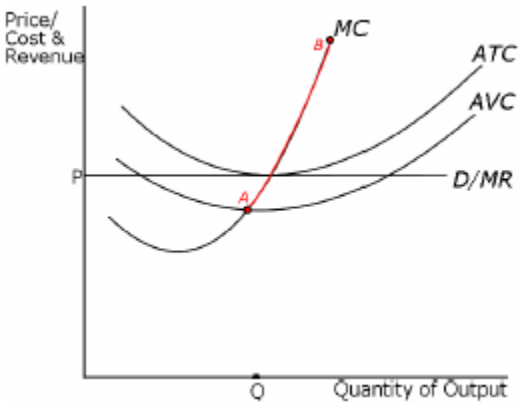
**Answer**




The individual firm will produce where *MR* equals *MC* as long as *MR* is greater than the minimum of *AVC*.

*4 points*

Therefore, the *MC* curve above the min. of *AVC* is the firm's supply curve (A-B in red on the graph).

*3 points*

For the industry, the supply curve is the sum of all the individual firm's *MC* curves above their shut down points, i.e. above the min. of *AVC*.

*3 points*

**3. The government plays a role in the economy. Using economics, explain the government's activities in each of the following situations. Be sure to define each term carefully.** (25 points)

**A. Public goods** (5 points)

**Answer**
A public good is a good that is non-rival and non-exclusive. Since sellers cannot prevent non-payers from using the good, the good usually isn't sold by private firms. The government will provide public goods in this case.

*3 points for explanation/definition, and 2 for government's role*

**B. Negative externalities** (5 points)

**Answer**
Negative externalities are costs imposed on third parties without decision-makers being aware of the costs or taking them into account. The government can impose penalties on decision-makers to force them to take negative externalities into account.

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*3 points for explanation/definition, and 2 for government's role*

**C. Positive externalities** (5 points)

**Answer**
Positive externalities are benefits received by third parties without decision-maker being aware of the benefits or taking them into account. The government can encourage decision-makers to make those choices by bearing some of the costs.

*3 points for explanation/definition, and 2 for government's role*

**D. Regulation of natural monopolies** (5 points)

**Answer**
A natural monopoly can produce a good at a lower average cost than if the same level of production is done by two or more firms. This is because the firm enjoys increasing returns to scale. The government often regulates natural monopolies in exchange for granting a firm an exclusive right to a particular area. Cable TV is a good example.

*3 points for explanation/definition, and 2 for government's role*

**E. Anti-trust legislation** (5 points)

**Answer**
Anti-trust legislation is designed to prevent firms with a lot of market power from engaging in activities that make consumers worse off. For example, if a firm with a lot of market power bundles its products to lock its competitors out of the market, resulting in higher prices for the consumer, that firm might be sued for violation of anti-trust legislation.

*3 points for explanation/definition, and 2 for government's role*

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